**To:** Melvin, Karen[Melvin.Karen@epa.gov]
**From:** Garvin, Shawn
**Sent:** Wed 1/22/2014 2:25:04 AM
**Subject:** Re: Propylene Glycol Phenyl Ether (PPh) Toxicity

Thx

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**From:** Melvin, Karen
**Sent:** Tuesday, January 21, 2014 9:22:42 PM
**To:** Garvin, Shawn
**Subject:** Re: Propylene Glycol Phenyl Ether (PPh) Toxicity

# Ex. 5 - Deliberative

**From:** Garvin, Shawn
**Sent:** Tuesday, January 21, 2014 8:54:32 PM
**To:** Melvin, Karen
**Subject:** Re: Propylene Glycol Phenyl Ether (PPh) Toxicity

Thank you. Just got off the phone with Bob and let him know we are running down info for him. We should get a few of us together in the morning to chat (how about 9:00?). Again, thx

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**From:** Melvin, Karen
**Sent:** Tuesday, January 21, 2014 8:50:01 PM
**To:** Garvin, Shawn
**Subject:** Fw: Propylene Glycol Phenyl Ether (PPh) Toxicity

# Ex. 5 - Deliberative

**From:** Ioven, Dawn
**Sent:** Tuesday, January 21, 2014 8:24:54 PM
**To:** Burns, Francis
**Cc:** Hodgkiss, Kathy; Melvin, Karen; Gross, Bonnie; Johnson, Eric
**Subject:** Propylene Glycol Phenyl Ether (PPh) Toxicity

Hi, Fran. I conducted a literature search on the toxicity of PPh. Here's what I found:

- This compound is hydrophobic, meaning that it is not very soluble in water.
- Based on its chemical properties, the volatility of PPh seems to be low.

This suggests that any release to air would occur at a slow rate.

•□□□□□□□ This compound does not appear to be very toxic in mammals, based on the following tox info in the literature:

o The oral Lethal Dose 50 (LD50) for this compound in rats is high (greater than 2000 mg/kg). LD50 values are important for determining acute toxicity. An LD50 of this magnitude would place this compound in the slightly toxic to relatively non-toxic range.

o Based on a drinking water study in rats, the No Observable Adverse Effect Level (NOAEL) for PPh is 1000 ppm (113 mg/kg/day). Translated to human exposures via ingestion, **up to 1800 ug/L PPh in tap water would not be expected to pose adverse health effects under conditions of chronic exposure**. (This calculation assumes an uncertainty factor of 1000, which is applied to the NOAEL to derive a provisional Reference Dose for risk calculations.)

o In terms of systemic toxicity via dermal exposure, the NOAEL in rabbits was greater than 1000 mg/kg/day, indicating that the dermal pathway contributes minimally to risk.

o Regarding maternal and fetal toxicity, the NOAEL in rats is 180 mg/kg/day, supporting other studies that suggest low toxicity for PPh.

o There is no indication in the literature that this compound is carcinogenic.

Hope this is helpful, Fran. Any questions, please give me a call at home. Thanks.

Dawn

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Dawn A. Ioven, toxicologist

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